NOTES ICHTYOLOGIQUES / *ICHTHYOLOGICAL NOTES*

NEW RECORDS OF TWO SOUTHERN FISH IN GALICIAN WATERS (NW SPAIN)

by

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RÉSUMÉ. - Nouveaux signalements de deux espèces à affinités tropicales en Galice (nord-ouest de l'Espagne).

Deux téléostéens à affinités tropicales, *Lepidotrigla dieuzeidei* (Triglidae) et *Kyphosus sectatrix* (Kyphosidae), sont signalées sur les côtes de la Galice (nord-ouest de l'Espagne). Dans cette région, la présence d'espèces tropicales et subtropicales a augmenté rapidement au cours des dernières années. Cela indique que le nord-ouest de l'Espagne est une zone importante pour l'étude des transgressions de poissons tropicaux et subtropicaux liées probablement au réchauffement global de la planète.

Key words. - Triglidae - Kyphosidae - *Lepidotrigla dieuzeidei* - *Kyphosus sectatrix* - ANE - Galicia - New records.

The presence of tropical species has been reported in Atlantic European waters since 1960's years (Quéro *et al*., 1996). This phenomenon has increased rapidly in the last years with a high number of species ranging from pelagic and coastal to deep-water fishes. In this paper, we report two new records of tropical fishes from Atlantic Spanish waters and discuss about their presence.

MATERIAL AND METHODS

The specimens were caught with trammel nets by local fishermen in the locality of Laxe and A Coruña respectively, in the northwest of Galicia (NW Spain) (Fig. 1). Both rare specimens were conserved in alcohol and stored in the zoological collection of Unidade Técnica de Pesca de Baixura (UTPB) of Xunta de Galicia. In the laboratory, measurements and meristic characters were recorded to the nearest mm. The identification was made using descriptions by Maul (1976) and Merella *et al*. (1998).

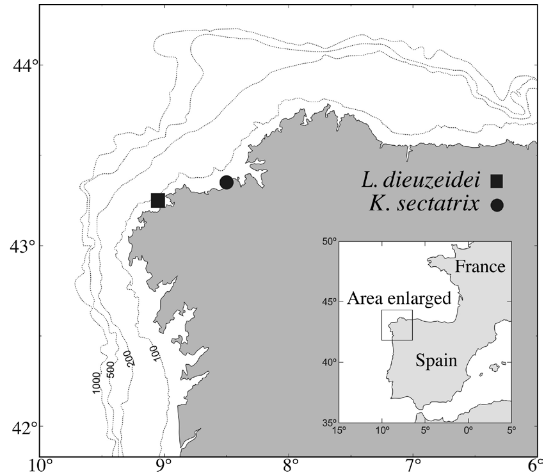

Figure 1. - Map showing the areas and stations where the specimens were captured. *[Carte indiquant la région et les endroits où les spécimens ont été capturés.]*

RESULTS

Lepidotrigla dieuzeidei **Blanc & Hureau, 1973 (Fig. 2)**

Material examined. - UTPB 18/2002, 114 mm SL, Galician waters, 18 April 2002, 43º 15' N-9º 03' W, 74-77 m depth.

Diagnosis. - D1: VIII; D2: 15; A: 15; P: 3 free+6; V: I+5; branchiostegal rays: 6; gillrakers in first arch: 8; SLL: 57. Following measurements are in millimetres and in parenthesis the percentage of standard length: total length: 142; standard length: 114; head length 36 (31.6); preorbital length: 10 (8.8); postorbital length: 13 (12.3); horizontal eye diameter: 13 (12.3); interorbital length: 11 (9.6); predorsal length: 38 (33.3); first dorsal base length: 23 (20.2); second dorsal base length: 42 (36.8); preanal length: 62 (54.4); anal base length: 39 (34.2); cleithral spine length: 11 (9.6); maxillary length: 13 (12.3); pectoral length: 41 (36); ventral length: 34 (29.8); body depth: 28 (24.6) and body width: 22 (19.3).

Description. - Body robust anteriorly, slender posteriorly, covered with large scales; breast scaleless; head large with a shallow and complete postorbital groove, from side to side, without spines; rostral process with several spines of similar length, without abrupt salients; vomerine teeth present; edge of the three first dorsal spines slightly serrated; opercular spine short, extending slightly beyond opercular membrane; nuchal spine long, extending beyond dorsal fin origin; a serie of bucklers along the base of first and second dorsal fins.

Colour when fresh reddish, more or less uniform dorsally, white ventrally; membranes of the upper rays of pectoral fin blackish.

Distribution. - Eastern and western Mediterranean Sea and eastern Atlantic from south of Portugal to Mauritania (Hureau, 1986; Golani, 1996).

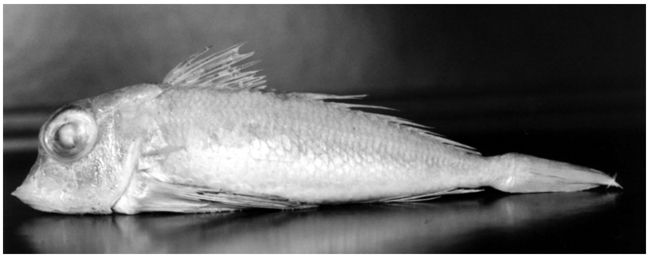

Figure 2. - Specimen of *Lepidotrigla dieuzeidei*, UTPB 18/2002, 142 mm TL, captured in Galician waters (NE Atlantic).

Kyphosus sectatrix **(Linnaeus, 1766) (Fig. 3)**

Material examined. - UTPB 19/2002, 212 mm SL, Galician waters, 18 July 2002, 43º 21' N-8º 30' W, 3-5 m depth.

Diagnosis. - D: XI+12; A: III+12; P: 18; V: I+4; branchiostegal rays: 7; gillrakers in first arch: 7+1+18. Following measurements are in millimetres and in parenthesis the percentage of standard length: total length: 271; fork length: 239; standard length: 212; head length 52 (24.5); preorbital length: 12 (5.7); postorbital

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Cybium 2004, 28(4): 367-368.

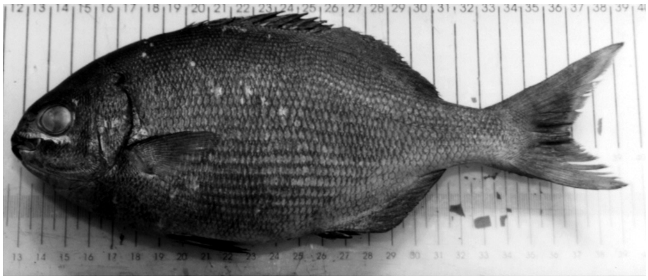

Figure 3. - Specimen of *Kyphosus sectatrix*, UTPB 19/2002, 271 mm TL, captured in Galician waters (NE Atlantic).

length: 26 (12.3); horizontal eye diameter: 14 (6.6); interorbital length: 24 (11.3); predorsal length: 71 (33.5); dorsal base length: 101 (47.6); preanal length: 120 (56.6); anal base length: 49 (23.1); mouth length: 13 (6.1); pectoral length: 39 (18.4); ventral length: 34 (16.0); body depth: 93 (43.9) and body width: 39 (18.4).

Description. - Body oval, high in profile, laterally compressed; small and blunt head, with equally small terminal mouth; strong incisor-like teeth; dorsal and anal fins are somehow overlapped by a sheath of scales, forked tails.

Colour when fresh grey overall, with faint yellow lines on the side, upper part of opercular membrane blackish.

Distribution. - Widely distributed in Western, Central and Eastern Atlantic, rarely found in the Mediterranean and off Madeira and Azores (Merella *et al*., 1998); one record in Arcachon, France (J.-C. Quéro, pers. com.); one unconfirmed record in Ireland (website of British Marine Life Study Society).

DISCUSSION

The presence of *L. dieuzeidei* seems to be casual owing to the rarity of this species in the Northeast Atlantic, instead *K. sectatrix* is a gregarious species whose presence has been detected by underwater fishermen in Galician waters at least from 2001, and could be a newly stabilised species.

In the last years, numerous tropical and subtropical species have been newly recorded in Galician waters (Bañón *et al*., 1997, 2002), suggesting a tropicalisation phenomenon. This northerly extension of distribution has been attributed to ocean warming (Quéro *et al*., 1998; Swaby *et al*., 1996) and the increasing number of immigrant species was significantly correlated with temperature increase in the North Atlantic over the last 40 years (Stebbing *et al*., 2002).

A possible mechanism that could explain this extension of distribution is the winter warming Iberian Poleward Current (IPC), also knowed as "Navidad current" (Pingree, 1990). This current could take an additional heat flux in the slope region equivalent to an extra month of summer heating (García-Soto *et al*., 2002) and could be the reason of the presence of tropical species (Koutsikopoulos *et al*., 1998).

The two species mentioned in this paper were recently recorded in the Mediterranean Sea (Golani, 1996; Merella *et al*., 1998), and now in Galician waters. This characteristic is common to most of tropical species, which occurs in Atlantic European waters, indicating a gradual displacement of these species northwards, acting the Gibraltar strait as an escape valve in these transports to the north (Bañón *et al*., 2002).

Acknowledgements. - We wish to thank Dr. W.J. Richards, J. Cabanas and J. Gil for their bibliographic help; to personal of UTPB, specially to J.M. Veres and J.M. Garrido for providing the specimens of Galician waters. The Xunta de Galicia supported this study.

REFERENCES

BAÑÓN R., CASAS J.M., PIÑEIRO C.G. & M. COVELO, 1997. - Capturas de peces de afinidades tropicales en aguas atlánticas de Galicia (noroeste de la península ibérica). *Bol. Inst. Esp. Oceanog*., 13(1-2): 57-66.

BAÑÓN R., DEL RÍO J.L., PIÑEIRO C. G. & J.M. CASAS, 2002. - Occurrence of tropical affinity fish in Galician waters, North-West Spain. *J. Mar. Biol. Ass. U.K*., 82: 870-880.

GARCÍA-SOTO C., PINGREE R.D. & L. VALDÉS, 2002. - Navidad development in the southern Bay of Biscay: Climate change and swoddy structure from remote sensing and *in situ* measurements. *J. Geophys. Res*., 107(C8); 28-1: 28-29.

GOLANI D., 1996. - The marine ichthyofauna of the Eastern Levant - History, inventory and characterization. *Isr. J. Zool*., 42: 15-55.

HUREAU J.-C., 1986. - Triglidae. *In*: Fishes of the North-Eastern Atlantic and the Mediterranean, Vol. III (Whitehead P.J.P., Bauchot M.-L., Hureau J.-C., Nielsen J. & E. Tortonese, eds), pp.1230-1238. Paris. UNESCO.

KOUTSIKOPOULOS C., BEILLOIS P., LEROY C. & F. TAILLEFER, 1998. - Temporal trends and spatial structures of the sea surface temperature in the Bay of Biscay. *Oceanol. Acta*., 21: 335-344.

MAUL G.E., 1976. - Triglidae. *In*: The Fishes taken in Bottom Trawls by R.V. 'Meteor' during the 1967 Seamounts Cruises in the Northeast Atlantic. *Meteor Forschungsergeb*., D 22: 58-60.

MERELLA P., MASSUTÍ E. & S. DEUDERO, 1998. - On the occurrence of *Kyphosus sectator* (Osteichthyes, Kyphosidae) in the Western Mediterranean. *J. Mar. Biol. Ass. U.K*., 78: 687-690.

PINGREE R.D. & B. LE CANN, 1990. - Structure, strength and seasonality of the slope currents in the bay of Biscay region. *J. Mar. Biol. Ass. U.K*., 70: 857-885.

QUÉRO J.-C., DU BUIT M.-H. & J.-J. VAYNE, 1996. - Les captures de poissons à affinités tropicales le long des côtes atlantiques européennes. *Ann. Soc. Sci. Nat. Charente-Maritime*, 8(6): 651-673.

QUÉRO J.-C., DU BUIT M.-H. & J.-J. VAYNE, 1998. - Les observations de poissons tropicaux et le réchauffement des eaux dans l'Atlantique européen. *Oceanol. Acta*, 21(2): 345-351.

TORTONESE E., 1986. - Kyphosidae. *In:* Fishes of the North-Eastern Atlantic and the Mediterranean, Vol. II (Whitehead P.J.P., Bauchot M.-L., Hureau J.-C., Nielsen J. & E. Tortonese, eds), pp. 912-913. Paris. UNESCO.

STEBBING A.R.D., TURK S.M.T., WHEELER A. & K.R. CLARKE, 2002. - Immigration of southern fish species to South-west England linked to warming of the North Atlantic (1960-2001). *J. Mar. Biol. Ass. U.K* , 82: 177-180.

SWABY S.E., POTTS G.W. & J. LEES, 1996. - The first records of the Blue runner *Caranx crysos* (Pisces: Carangidae) in British waters. *J. Mar. Biol. Ass. U.K*., 76: 543-544.

Reçu le 06 octobre 2003.
Accepté pour publication le 06 mai 2004.